

State DOT and Related Industry Organizational Structures and Best Practice: Synthesis

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Transportation Synthesis Reports (TSRs) are brief summaries of currently available information on topics of interest to WSDOT staff. Online and print sources may include newspaper and periodical articles, NCHRP and other TRB programs, AASHTO, the research and practices of other state DOTs and related academic and industry research. Internet hyperlinks in the TSRs are active at the time of publication, but host server changes can make them obsolete.

Request for Synthesis

Jerry Lenzi, WSDOT Chief Engineer, Assistant Secretary of Engineering and Regional Operations, requested a synthesis of the current organizational designs of state DOTs and the best practices for organizational design. Also included are examples of organizational structures and practice from industry that reflect a similar type of work (planning, design, construction, etc). The synthesis includes a short summary of how-to guidance and reflection of common patterns (or not) in organizations. The synthesis includes a PDF of the organizational charts from the fifty state DOTs and District of Columbia.

Databases Searched

TRIS Online	TLCAT
Research in Progress (RiP) Database	FHWA's website
Google	Wisconsin DOT Transportation Synthesis Reports
All State DOT Websites	AASHTO's website

Categories of information and resources included are:

- A summary of recent DOT organization redesigns and highlights of the issues in the states of Arizona, North Carolina, Minnesota, and Texas including published literature related to organizational design with URLs and PDFs.
- Information about a successful private sector company, General Electric, and its organizational structure.
- A summary of recommendations from leading organization/management consultants on current organization design and strategy.
- Sources with articles related to changing transportation policy, funding, organization, and structure with URLs provided when available.
- A PDF of the Organization Charts from the 50 state DOTs and the District of Columbia is part of the Synthesis and included.

Tom Warne, former Utah DOT chief, and currently owner of Tom Warne and Associates, LLC, says, “Many models exist across the country for how a state DOT can be organized. In fact, we have done study after study that show the mission is the same but the way the states are set up to deliver on that mission can vary widely. No model is perfect nor considered the “answer key” to the org chart question. They all work; people make them work.”

Factors Affecting DOT Organizational Design

State DOT's will feel the impact of the state of the nation's economy for years to come. According to a study by the Center on Budget and Policy Priorities, the unprecedented state fiscal problems brought on by the worst decline in tax receipts in decades shows no sign of letting up.

Due to declining state and federal revenues and the change in focus and direction of transportation funding priorities, DOT's will likely respond by reorganizing their structures for a new transportation era.

Reauthorization of the Transportation Act will have an impact on state DOT organizational structures. Sources reviewed indicate the Act will shift away from highway funding to multimodal solutions and that programs will focus on multimodal solutions to congestion and linking transportation, land use, and housing. Most sources support directing the primary focus of new transportation funding toward metropolitan regional planning agencies. State DOT's will maintain responsibility for maintenance, safety, and traffic programs. If this occurs, state DOT's redesigns will adapt to changing circumstances. State DOT's will likely have more responsibility for financing any new improvements through PPPs and tolling facilities, and will need to align organizational structures accordingly.

There is a general trend in organizations toward flatter or “lean” organizations—or those focused on value streams. A value stream is all functions and stakeholders who need to work in harmony to provide a product/service.

Most sources recommend hiring a reputable organizational design/management consultant to do a complete organizational analysis that leads to a new organizational design that meets an agency's strategic needs.

Review of State Departments of Transportation

Organizational charts were collected from most state DOTs. Kansas, Maryland, Massachusetts Nebraska, New Hampshire, New Mexico, and South Carolina do not have current charts and did not have versions they felt were representative of their organizations and so they are not included.

While there are differences between the functional distributions in state DOTs there are many similarities. Most DOTs have regions or districts though the number and reporting structure vary. Functional responsibilities are similar though organized differently. Modal responsibilities vary. Without specific questions about the organizations, a comparison is quickly unwieldy.

More detail is provided on four state DOTs because of recent reorganizations. They are: Texas; North Carolina; Arizona; and, Minnesota. In addition, six states offer different structures that may warrant further review:

Missouri: The table of organization is significantly different that most organizational charts and further information is needed to understand the chart.

New Jersey: Regions report through a functional chain to a central manager.

Vermont: Project development and Operations are centralized. Maintenance is divided into nine districts.

Establishing Regional Boundaries

An effort was made to identify guidance for development of or common themes in how regional boundaries are established. The following information was compared for each state DOT to look for relationships with the number of Regions/Districts:

- State population
- Number of counties
- Number of road miles
- Capital and Maintenance Budgets

No discernable patterns were found. A cursory search for guidance on how regional boundaries are established found a variety of reasons including:

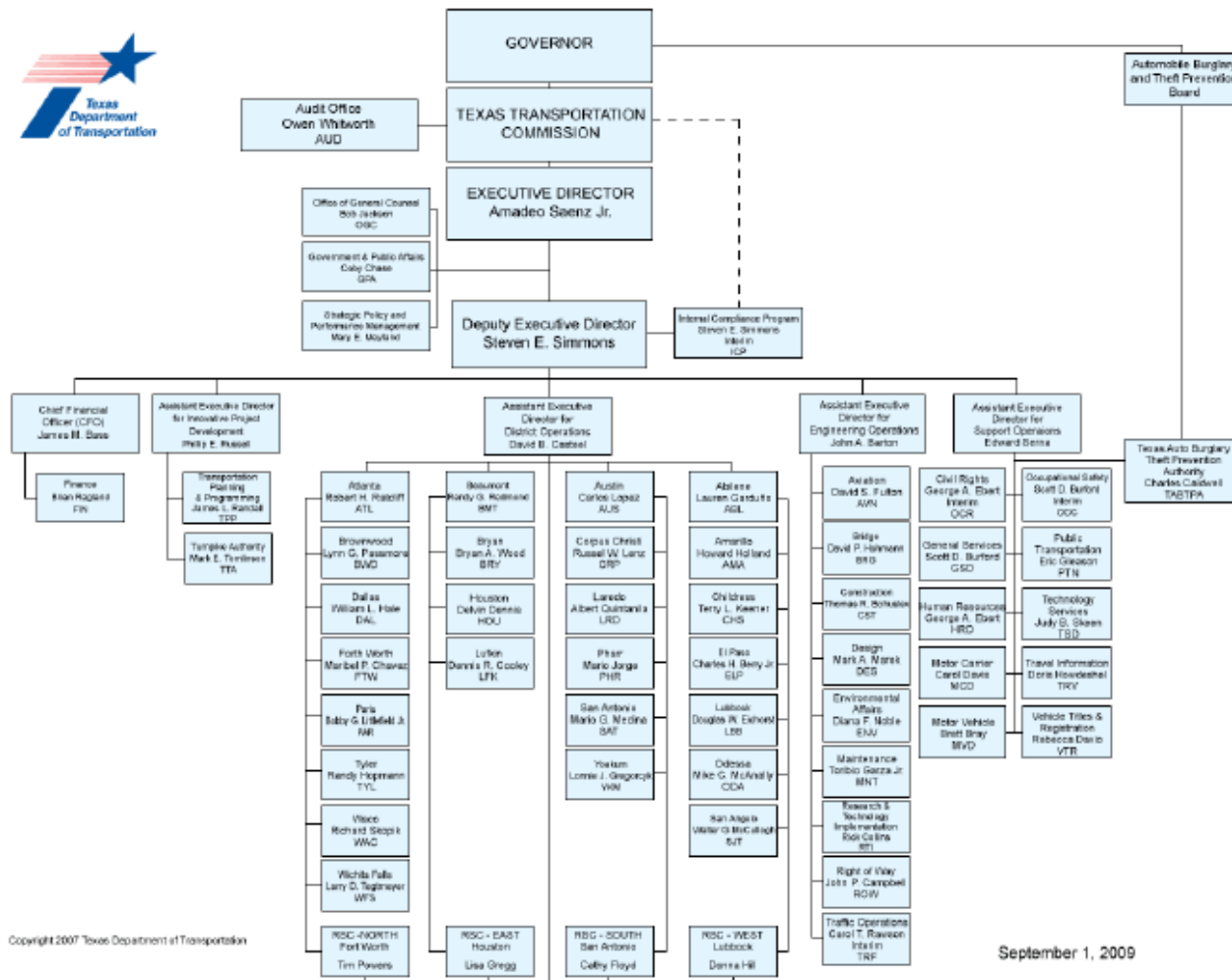
- Political boundaries
- Efforts to align boundaries for organizations with common interests, constituents, or decision-making interests
- Environmental characteristics (such as watersheds)
- To facilitate the delivery of functions or services
- Management of a geographic territory

Two papers are included that provide some insight into setting regional boundaries.

- A 1996 study by **Joseph Rowntree Foundation** on the regional structures in British public administration. <http://www.jrf.org.uk/sites/files/jrf/g48.pdf>
- A 2006 paper by the Office of Program Policy & Government Accountability titled *The Legislature Could Consider Several Options for Establishing More Uniform Regional Boundaries*. <http://www.oppaga.state.fl.us/reports/pdf/0601rpt.pdf>

Selected State DOT Organization Redesigns

Texas DOT



The TxDOT Organization Chart includes an executive director and a deputy executive director, assisted by a chief financial officer, four assistant executive directors, and three executive-level administrators lead TxDOT. Twenty-one divisions and six offices headquartered in Austin provide administrative and technical support to TxDOT's 25 districts. A district engineer manages each district office and oversees the design, location, construction, and maintenance of its area's transportation systems. All of TxDOT's Districts report directly to the Assistant Executive Secretary for District Operations.

To prepare for the 2009 Sunset Review process, the Texas Department of Transportation (TxDOT) contracted for five independent assessments of its management and business operations. The auditable units assessed included

A. Transportation Funding

- B. Contracting and Project Delivery
- C. Consumer Services
- D. Management and Support Functions
- E. Field Operations

TxDOT retained Deloitte Consulting LLP (“Deloitte Consulting”) to conduct the independent assessment of TxDOT operations related to Auditable Unit D — Management and Support Functions. The objectives of this project were to assess high-risk areas of TxDOT’s management and support functions to improve the quality of the statewide transportation services, identify opportunities for enhancing revenue to maximize financial resources available, develop strategies to remove operational barriers and improve the efficiency and effectiveness of operations, highlight exemplary and innovative practices, and recommend opportunities for reducing risks and improving operations at TxDOT’s headquarters.

Table 1: Organizational Structures

Type of Structure	Description	Strengths	Weaknesses
Geography/Customer	Organization structured around location or customer types.	Single point of contact, high market awareness, easier for customers to interface and interact.	Less sharing/higher costs, more product or service variability.
Functional	Organization structured by professional disciplines such as marketing, finance, and information technology	Easier to maintain functional expertise, staff tends to be more loyal to profession, usually has lower cost at the unit level.	Tends not to have end-to-end customer view, functional priorities sometime are conflicting, more difficult to change processes due to segregation of functions.
Team Based	Organization working in a project-oriented business with skills and activity overlaps among teams.	Highly collaborative work units, integrated functions, and backup skills.	Some redundancy of functions, lower sense of functional accountability.
Process	Organization structured around its core business processes, and manages processes continuously.	Easier coordination, focused on the customer, more flexible, minimal segregation, flatter, staff gain broader knowledge of the business.	Difficult to implement and sustain, requires cross-functional expertise, long-term management commitment.
Product/Services	Organization structured largely by product groups or service areas.	Centralized accountability, higher quality, faster decision making, focused on the customer of each product/service group.	Lower sharing of functional skills, slightly higher costs, narrower careers, conflicts of product priorities versus enterprise priorities.
Matrix	Organization structured by multiple dimensions such as customer segments (public sector, industrial, health care, etc.) with supporting service area or product horizontals.	Flexible resource planning, high functional expertise exposed to variety, forced cooperation service areas.	Multiple bosses, competition for valuable resources, play managers against one another.

Deloitte offered considerations when thinking about organizational design:

The design should:

- Be a function of both market conditions and management's strategy and goals.
- Reflect both the business environment and management's strategy and goals. It should balance formal business processes, such as structures and performance measures, and informal, such as workgroup dynamics.
- Balance the supply and demand of resources for every organizational unit and individual. Supply of resources is determined by the level of control over resources and the level of support that an organizational unit or individual has. Demand of resources is based on the accountability assigned to organizational units and the degree of influence the organizational unit or individual can use to meet its goals.
- Balances the tension between "differentiation" and "integration." Differentiation allows economies of scale and specialization while providing adequate integration to allow for coordinated work and realization of interdependent goals.
- Help process information most efficiently and in keeping with the level of uncertainty faced by the organization. Higher levels of uncertainty require more information processing in the form of reporting structure or integrating mechanisms.
- Recognize that decisions are not always democratic and, while employee participation is important in building and implementing a new design, some difficult and potentially unpopular decisions will need to be made by senior executives

The authors state that "There is no perfect design — each design poses its own challenges that need to be addressed by the design elements".

North Carolina DOT

The North Carolina DOT organizational changes came after a \$3.6 million internal audit in 2007, in which the DOT found its own employees thought the agency was inefficient and unfocused. A state audit also found that NCDOT wasted around \$150 million in taxpayer dollars by delaying road projects. NCDOT hired McKinsey and Company to do an organizational analysis and help them in restructuring the organization around new strategic goals. Specifically, the analysis showed that NCDOT should build on their strengths but seize opportunities to improve in the following areas:

- Become more strategic in the way it manages the state's transportation network in response to North Carolina's needs.
- Set clear direction and performance accountability for all units.
- Prioritize projects, programs, and services to maximize efficiency and system performance.
- Establish coordinated core processes to advance the Department's progress against expected outcomes.
- Significantly strengthen leadership capabilities and talent-management practices. The new NCDOT Organization Chart does not indicate districts, but districts exist within the organization structure. NCDOT has three districts whose primary responsibility is roadway maintenance.

Secretary of Transportation, Lyndo Tippetts responded with a restructuring plan that was accomplished by moving or reallocating existing positions rather than creating new ones. A key component of this plan is alignment of NCDOT business units along strategic functional lines and transitioning to a comprehensive multi-modal approach to delivering transportation projects. This new alignment will also address organizational structure challenges identified by the outside contractor hired to assess NCDOT. The challenges identified are:

- A silo culture across the Department, leading to limited coordination among business units;
- Insufficient accountability for delivery of projects, programs, services and initiatives;
- Inconsistent coordination across geographies in planning, designing, delivering and maintaining projects; and
- Slow decision-making processes with too many organizational layers.

The strategic functional alignments are:

Organization Monitoring, Communication & Control – This part of the organization will be responsible for overseeing and evaluating the day-to-day operations of the Department to ensure optimal efficiency, effectiveness, and accountability. The responsible positions for this part of our organizational structure are the Chief Operating Officer (Chief Deputy Secretary), Inspector General, Communications Director and Governance Office Director.

Transportation Strategy & Investment Analysis - This part of the organization will be responsible for developing, monitoring, and managing strategic plans and investment alternatives based on the long-range, multi-modal transportation needs of the state. The responsible positions for this part of our organizational structure are the Deputy Secretary for Intergovernmental Affairs and Budget Coordination and the Chief Financial Officer.

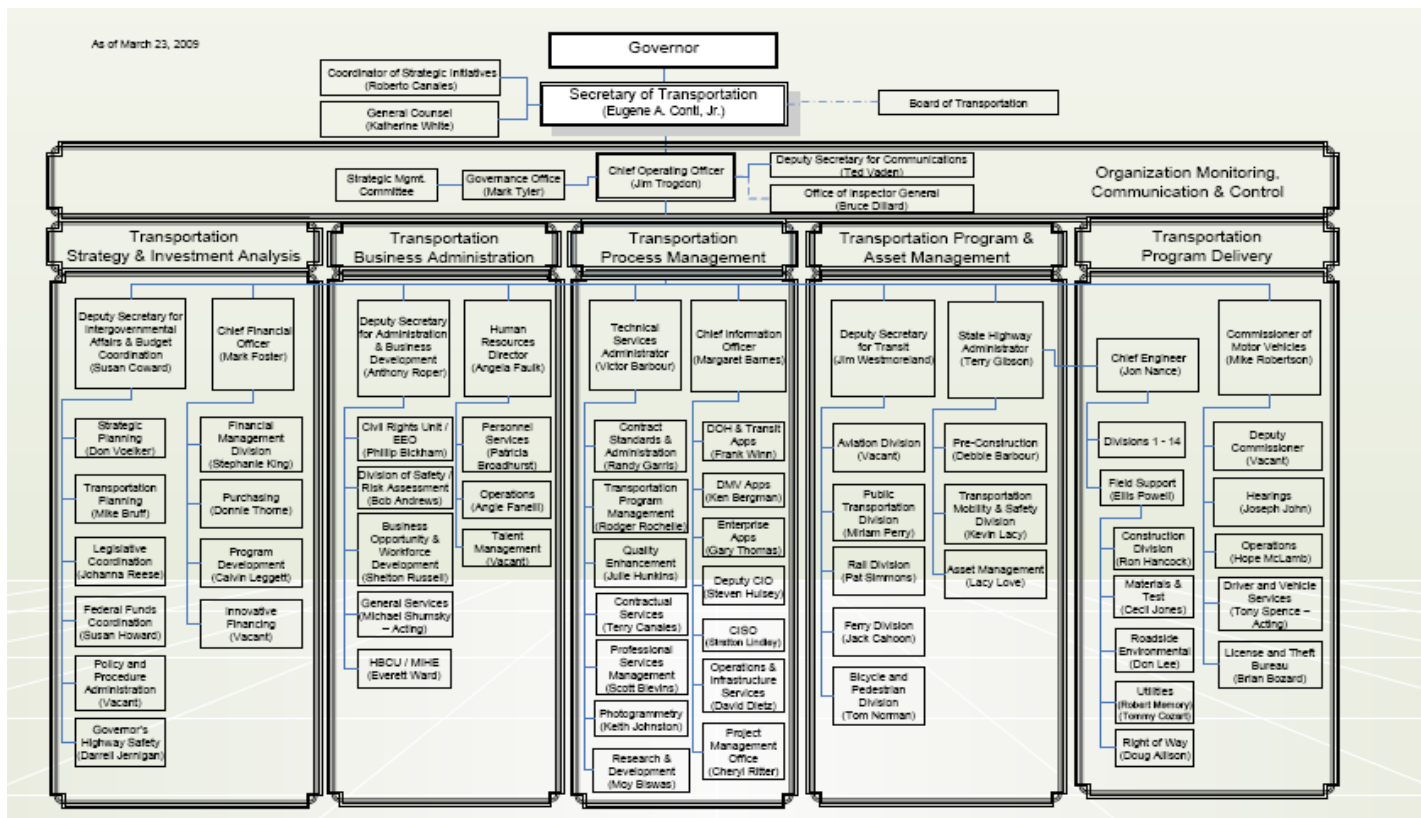
Transportation Business Administration - This part of the organization will be responsible for providing day-to-day business administration and supportive service functions to the Department. The responsible positions for this part of our organizational structure are the

Deputy Secretary for Administration and Business Development and the Human Resources Director.

Transportation Process Management - This part of the organization will be responsible for providing department-wide technical and administrative services that improve delivery of the projects, programs, services, and initiatives managed by NCDOT. The responsible positions for this part of our organizational structure are the Technical Services Director and Chief Information Officer.

Transportation Program & Asset Management - This part of the organization will be responsible for providing the day-to-day central management, expertise, and administration of the highway and multi-modal transportation programs being managed by NCDOT.

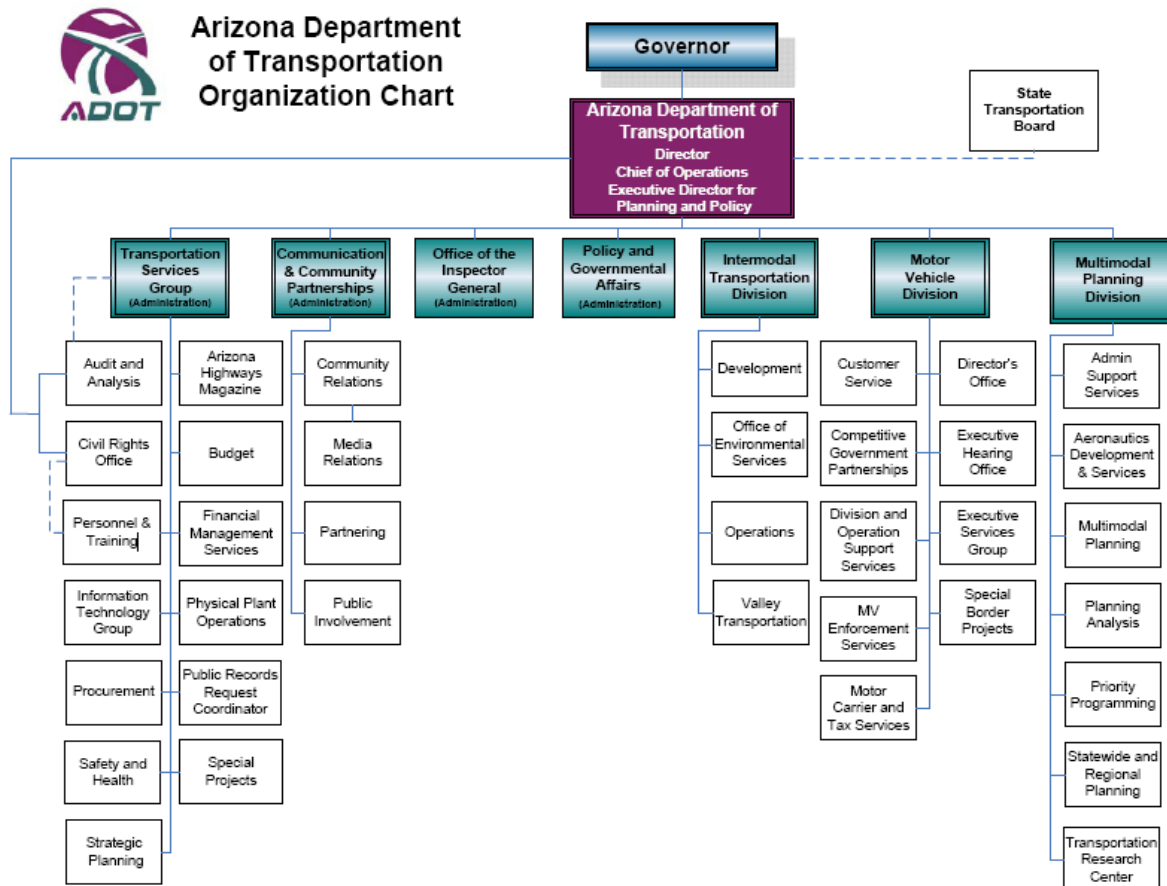
http://www.ncdot.gov/templates/download/external.html?pdf=http%3A/www.ncdot.org/download/performance/Organization_Summary.pdf



Arizona DOT

Arizona DOT's Executive Director, John Halikowski, was appointed in February 2009, and reorganized the department in July 2009. The new ADOT Organization is a flat structure focused around the Agency's strategic plan. It includes four administrative functions and three Divisions:

- Administration: Transportation Service Group; Communication & Community Partnerships; Office of the Inspector General; and, Policy and Governmental Affairs
- Divisions: Intermodal Transportation, Motor Vehicle, and Multimodal Planning

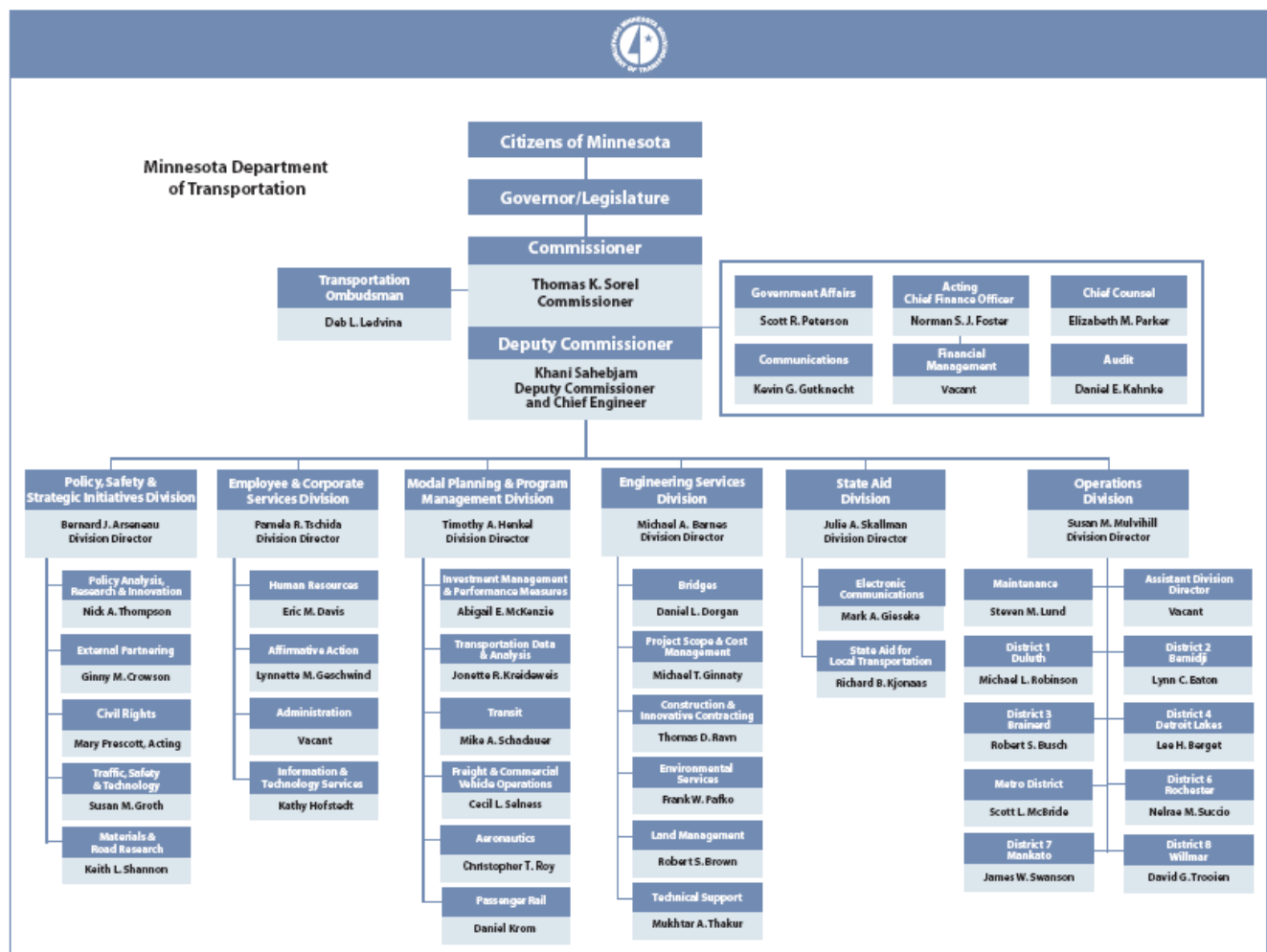


July 17, 2009

The Intermodal Transportation Division (ITD) is responsible for an extensive public participation process and technical evaluation effort known as the priority programming process. This process culminates in the Five-Year Transportation Facilities Construction Program for Highways and Airports. This program emphasizes meeting pavement preservation needs on the interstate and non-interstate highway systems and continuing funding for projects started in corridors in previous five-year programs. Districts are part of the Intermodal Division.

Minnesota DOT

The changes at the Minnesota DOT came about after a change in agency leadership in 2008. Commissioner Tom Sorel announced his reorganization decisions and based his decisions on feedback and discussion on how MN/DOT could build better “transparency and trust with our stakeholders and make the agency more accessible to all people.” A key role in achieving that goal is the creation of a transportation ombudsman, said Sorel, who appointed Deb Ledvina to the position. The ombudsman will focus on external issues and have the responsibility for independently investigating complaints and determining whether the department’s decision making may have been unreasonable, unfair, arbitrary, or improper. The ombudsman will not be involved with routine processes already handled by other areas of MN/DOT. “This position will serve as the conscience of the department,” Sorel said. The MNDOT Organization Chart maintains the District structure under Operations.



July 2009

Private Sector Organization Examples

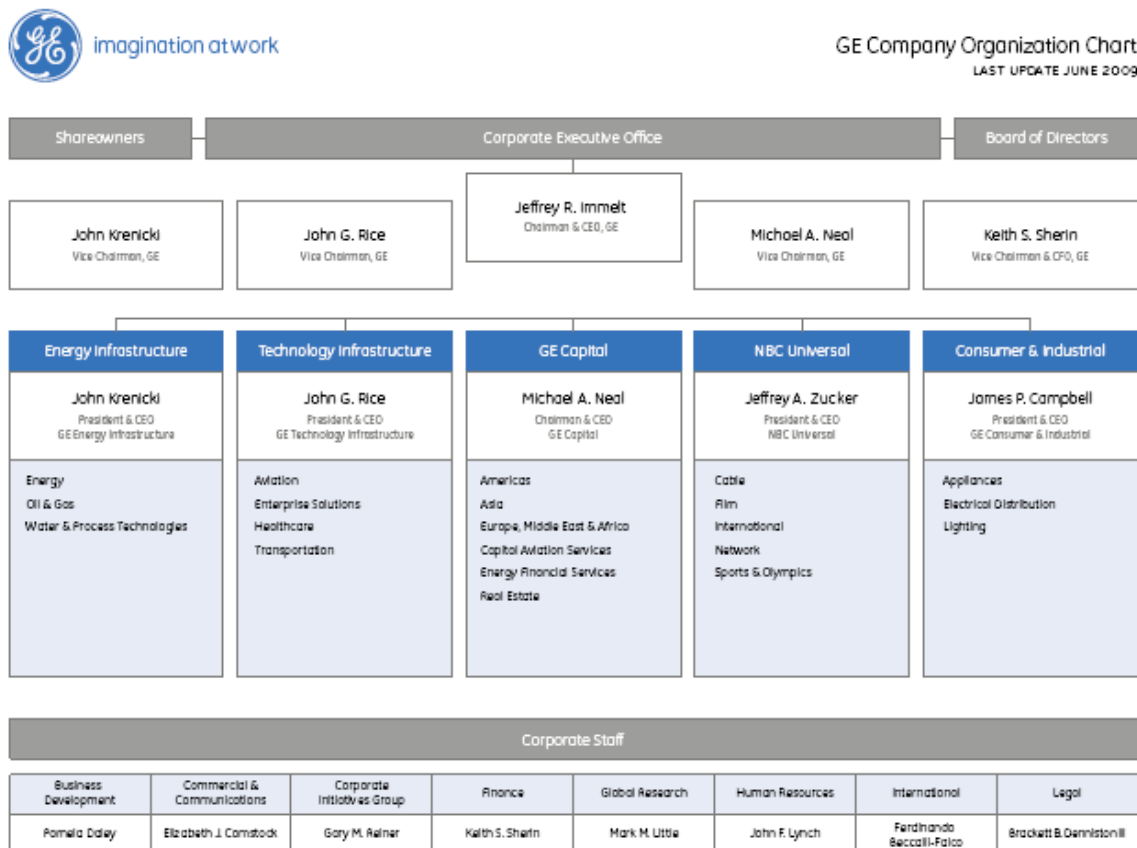
As requested, we looked for information on companies with design and construction responsibilities and an organization with multiple locations and responsibilities. We looked for information on Comcast but did not find reportable information. We considered private companies that develop and manage transportation facilities but their structures tend to establish [separate subsidiaries](#) for independent projects. We considered other companies, such as Health Management Organizations but could not find a strong corollary to a state DOT.

General Electric

In the private sector, General Electric (GE) is one of the top performing companies over the past decade. GE's Organization Chart indicates the company has a flat structure organized along business lines for:

- Energy Infrastructure
- Technology Infrastructure
- GE Capital
- NBC Universal
- Consumer and Financial.

These business units are supported by centralized functions including: Business Development, Commercial & Communications, Corporate Initiatives Group, Finance, Global Research, Human Resources, International and Legal. GE's long history of success is attributed in part to its company values and dedication to leadership development.



More on Private Companies

The Secret of Enduring Greatness

Jim Collins, 2008. Source: Jim Collins Website

. In the early 20th century, General Electric's Charles Coffin brought forth perhaps the most significant business innovation of the past 200 years: systematic management development. GE created generations of leaders and thereby generated more than a century of sustained success so reliable that a hiccup in quarterly profits can drive down the entire stock market. In 1955, GE sat at No. 4 on the Fortune 500; today it sits at No. 6. These companies trained leaders who could evolve and create a portfolio of flywheels—from candles to Pringles, from medical plasters to Tylenol, from light bulbs to jet engines—yet they also held tight to core values that have remained fixed for 100 years or more.

When you've built an institution with values and a purpose beyond just making money—when you've built a culture that makes a distinctive contribution while delivering exceptional results—why would you capitulate to the forces of mediocrity and succumb to irrelevance? And why would you give up on the idea that you can create something that not only lasts but deserves to last? The best corporate leaders never point out the window to blame external conditions; they look in the mirror and say, “We are responsible for our results!” Those who take personal credit for good times but blame external events in bad times simply do not deserve to lead our institutions. No law of nature dictates that a great institution must inevitably fall, at least not within a human lifetime. That most do fall—and we cannot deny this fact—does not mean you have to be one of them.

http://www.jimcollins.com/article_topics/articles/secret-of-enduring-greatness.html

GE Organization Chart 2009

http://www.ge.com/pdf/company/ge_organization_chart.pdf

Redesigning an organization to take advantage of today's sources of wealth creation isn't easy, but there can be no better use of a CEO's time. 2007. Lowell L. Bryan and Claudia I. Joyce Source: McKinsey Quarterly: Strategy Practice

Corporate strategy, according to the classic definition, consists of the actions a company takes to gain competitive advantage. Executives invest enormous energy in product designs and long-range strategic plans, though many of these initiatives become obsolete as markets and competitors adapt, social norms and regulations evolve, and technologies advance. Yet most corporate leaders overlook a golden opportunity to create a durable competitive advantage and generate high returns for less money and with less risk: making organizational design the heart of strategy. It's time for executives to recognize the strategic need to develop organizational capabilities that help companies thrive no matter what conditions they meet.

Modern corporations are massive, complex, dynamic ecosystems. In many of them, organizational inertia is considerable. Organizational-design work is hard and time consuming, and any meaningful change usually involves difficult personality issues and corporate politics. No surprise, then, that rather than tackle internal organizational issues to boost the performance of companies, many CEOs typically opt for the ad hoc structural change, the big acquisition, or a focus on where and how to compete.

(Full Report available through WSDOT Library)

http://www.mckinseyquarterly.com/Strategy/Strategic_Thinking/Better_strategy_through_organizational_design_1991

Fortune World's Most Admired Companies 2009

Fortune Magazine

Innovation People mgmt.; Use of assets.; Social responsibility; Management quality; Financial soundness; Long-term investment; Product quality; Global competitiveness; All industries; Industry champions

And the winners are...

Which companies have the best reputations? With admiration in such short supply these days, it's more valuable than ever. Apple tops the list for the second year in a row. Who else made the top 50 this year? More

1. Apple
2. Berkshire Hathaway
3. Toyota Motor
4. Google
5. Johnson & Johnson and GE

• See the top 50

<http://money.cnn.com/magazines/fortune/mostadmired/2009/index.html>

FORTUNE Magazine's Top 100 Employers to Work For 2009

Rankings 100 Best Companies to Work For 2009 2008 2007 2006

Top 100 Companies By size, Job growth, Low turnover, No layoffs, Women/Minorities, All stars, Annual pay Bonus, Health care, Child care, Work-life balance, Telecommuting, Sabbaticals, and Unusual perks.

Even in this economy, some companies are going out of their way to please employees. This year, there's a new no. 1, as Google slips to no. 4. See detailed profiles of the top 100 employers, including interactive maps, key perks, contact information, and more.

And the winners are...

NetApp; Edward Jones; Boston Consulting; Google; Wegmans; Cisco; Genentech; Methodist Hospital; Goldman Sachs; Nugget Market; See the top 100

<http://money.cnn.com/magazines/fortune/bestcompanies/2009/>

Published Literature Sources

(links to online source provided as available)

Transportation Resources

Alternate Organizational Processes in State Departments of Transportation. 2009 AASHTO

The objective of this project is to provide a resource to top-level state DOT management on organizational designs and design processes to improve their responses to various external and internal forces of change. It is envisioned that this resource can be used to support organizational assessment as well as to provide a basis for future dialog among leadership of state DOTs as opportunities or needs arise.

The recommendations include:

1. Adapt organization design to fit particular needs and circumstances
2. Develop alternatives and evaluate strengths and weaknesses
3. Involve managers and employees as appropriate.
4. Build ownership and provide support as needed
5. Assess the experience and the performance results and modify designs as needed.
6. Do not make major organizational changes often.

This report includes a 20-step Action Plan, which will help guide the CEO and senior managers through the process of considering organizational design as a problem-solving technique, planning for it, and executing it for successful conclusion.

(Document attached as a PDF)

21st Century Leadership and Management Techniques for State DOTs. April 2009. AASHTO

Organization Assessment

A great many of the DOTs contributing to both this research and the previous research reported that they use organizational assessments to enhance leadership decisions, and the use of assessments was especially prevalent among the 10 DOTs identified as the most successful. The implication of these findings for the new CEO is to determine what assessment methods and data are available, and their usefulness for the roadmap milestone, "Determine What's Most Important."

It is important to distinguish "organization assessment" from measures of operating performance, such as costs per activity or unit of output. Generally, measures of operating performance indicate the organizations achievements, while organizational assessments focus primarily on how well the overall work system, processes, and practices are functioning to produce the desired results.

The 10 most successful DOTs had invested thoughtfully in answering the question, "How will we know when we are successful?", and their answers included both measures of operating performance and organizational assessments. The large majority of organizational assessments

used by the participating DOTs fell into one of two categories: 1) employee surveys to measure employee satisfaction and the quality of the work environment; and 2) measures of organizational effectiveness.

The role requires a combination of certain skills, attributes, and practices. The challenge of this research was to cull out the variables and focus on the key practices that accelerate high performance, that have high payoff application for state DOT CEOs and their executive staff in the 21st Century and acquired quickly and easily put to use. Evaluation of practices largely, but not solely, is on the Baldrige criteria for Performance Excellence in the categories of Leadership and Customer and Market Focus. The Leadership category includes how leaders guide and sustain the organization, such as how they set and deploy organizational vision and values, how they communicate with and engage the entire workforce, and how they govern the organization. The Customer and Market Focus category includes determining how customer requirements are determined and met.

(Document attached as PDF)

A Transportation Executive's Guide to Organizational Improvement. 2007. AASHTO.

This guide is useful as a “toolbox.” Wherever you are in the organization, you should be able to find something of value that will help you to improve the organization's effectiveness. The guide's organization is in a way that you can read any section without reading the entire document. However, we suggest that you start by reviewing the common themes, driving forces and summary in Section 2. Then you can decide what areas are of most interest to you. The following brief summary of each section will help you decide where to start. Section 1 provides an historical retrospective of studies and literature. Section 2 identifies the nine common themes discovered among the sites visited and describes those themes along with several of the best practices of these DOTs. This report provides only an overview of these practices. If something whets your appetite and you are interested in learning more about a certain practice, each of the sites has agreed to be responsive to requests for benchmarking. Section 3 provides a “roadmap” that can help you figure out where and how to start improving organizational effectiveness. Section 4 identifies best practices that were beyond the scope of the nine common themes. The tables and the analyses of the survey results in Section 5 will give you further insight into which DOTs are using which tools and practices and further direct you to those states that believe their efforts are contributing to organizational effectiveness. The Appendices include details about the research, the survey, the analysis, and the sites visited. The intent of this research is to assist departments of transportation (DOTs) in identifying and pursuing opportunities for enhancing organizational performance.

Site visits to the 10 selected transportation departments revealed the following nine common themes, or key success factors, that contributed to overall organizational improvement, and effectiveness.

- Legacy Leadership
- Champions
- Measures of Success
- Desire to Look in the Mirror
- Alignment
- Dialogue
- Taking Care of Business
- A Culture of Kaizen
- Empowerment with Accountability

[PDF Available](#)

A Transportation Executive's Guide to Organizational Improvement, June 2006.
NCHRP Project 20-23 (42) "Guidelines for State DOT Quality Management Systems".
Prepared by Oasis Consulting Services, Las Vegas, NV

The intent of this research is to assist departments of transportation (DOTs) in identifying and pursuing opportunities for enhancing organizational performance. The research involved asking DOTs, via written surveys and site visits to selected agencies, to describe their organizational improvement programs and practices and to assess the impact of these methods on performance. The information gathered serves to document many specific "best practices" so that any DOT's desire to benchmark particular areas of interest can be expedited.

The most important purpose of this research, however, is to provide a guide for CEOs and senior leaders to improve organizational performance. To achieve this purpose, researchers searched for common themes among the DOTs that reported the greatest strengths in their approaches to improvement.

Much of this guide is devoted to describing the commonalities that were discovered so that other DOTs can know not only *what* the characteristics of the best practices are, but also *how* the agencies approached the challenges of putting those practices in place.

<http://www.transportation.org/sites/quality/docs/NCHRP%20Guide%20master%206%2030%2006.pdf>

2006 SDDOT Organizational Health Assessment. 2007 South Dakota Department of Transportation, Pierre, SD. Prepared by Oasis Consulting Services, Las Vegas, NV

The South Dakota Department of Transportation (SDDOT) has initiated performance measurement to measure, track, and continuously improve the Department's performance at all levels. Performance measurement emphasizes four "key measurement areas": customer satisfaction, organizational health, business improvement, and finance. Each work team in the Department has developed performance measures related to business improvement and finance, but customer satisfaction and organizational health are measured by coordinated, Department-wide efforts. The term "organizational health" refers to the Department's ability to accomplish its mission now and in the foreseeable future. Organizational health depends on many factors that affect employees, including: communication; staff morale; understanding of policies; work environment; staff competency; awareness of mission; work force stability; cooperation; training and professional development; work force composition; management skills; management philosophy; reward and recognition; common purpose among all staff levels; and prevailing economic climate. The Department performed its first four organizational health assessments in 1998, 2000, 2002, and 2004, respectively. In each case, researchers conducted focus groups to identify issues of concern to employees, then developed and distributed a confidential survey to every permanent employee. The most recent survey included an electronic and paper version. Survey results were analyzed to identify domains of organizational strength, operational capability, or concern. The findings have significantly influenced the Department's policies and actions, including development and execution of its 2001-2006 Strategic Plans. Research is needed to reassess the Department's organizational health, to determine how effective actions have been in responding to past assessments, and to identify additional practical opportunities for improvement. The objectives of this research project are to: (1) measure the Department of Transportation's employees' perceptions and level of satisfaction regarding organizational health; (2) identify the Department of Transportation's organizational strengths and weaknesses; (3) evaluate progress in improving the Department's organizational culture, through comparison between the current assessment and baseline measurements of

earlier assessments; (4) specific actions that the Department can take to achieve its strategic goals and improve its organizational health; and (5) refine a survey instrument and process that can be used to periodically assess the Department's organizational health.

http://www.state.sd.us/Applications/HR19ResearchProjects/oneproject_search.asp?projectnbr=SD2006-02

SDDOT 2004 Organizational Health Assessment. December 2004. Study SD2003-11 South Dakota Department of Transportation. Prepared by Oasis Consulting Services, Las Vegas, NV

This is a report of an organizational health assessment for the South Dakota Department of Transportation (SDDOT) in 2004. Organizational health is one of the three pillars of the SDDOT strategic plan, so the results of this project are a key measure of performance against the strategic goal to “make the Department of Transportation a desirable place to work” in order to “attract and retain the best possible employees.”

The five objectives of this study were: to: 1) measure the Department of Transportation's employees' perceptions and level of satisfaction regarding organizational health; 2) identify the Department of Transportation's organizational strengths and weaknesses; 3) evaluate progress in making desired changes in the Department's organizational culture, through comparison of the current assessment with prior assessments; 4) recommend specific actions that the Department can take to achieve its strategic goals and improve its organizational health; and 5) refine a survey instrument for continued, periodic use in assessing the Department's organizational health.

http://www.state.sd.us/Applications/HR19ResearchProjects/Projects%5CSD2003-11_Executive%20Summary.pdf

Benchmarking as a Tool for Assessing a Transportation Organization's Performance. 2003. Lima, P M and Herz, T, Institute of Transportation Engineers, Washington, DC Conference: Institute of Transportation Engineers 2003 Annual Meeting and Exhibit (held in conjunction with ITE District 6 Annual Meeting), Seattle, Washington

Transportation organizations throughout the nation are striving to become more efficient in delivering transportation services by using benchmarking as a tool for assessing performance. Benchmarking measures products and services within the organization or against peer organizations to bring about internal improvements. This paper describes one such study that was undertaken by the Maricopa County Department Transportation (MCDOT) in Arizona. The paper first describes the overall process that was designed to benchmark functions, products, and services both internally within MCDOT and externally against peer agencies. This process built upon the County's Managing for Results (MFR) process that measures goals and objectives. A MCDOT Profile is described that characterizes the organizational structure and major services. Business functions and the benchmark measures that were used to quantify performance are then described. Next, the paper discusses the method for collecting, quantifying, and analyzing the measures for each of the Department's seven divisions and related branches. The approach for surveying nine peer organizations in the states of California, Florida, Nevada, Oregon, and Washington follows with a comparison of results between MCDOT and the peer agencies. In addition, lessons learned from designing the benchmarking process, identifying and categorizing functions, collecting data on a regular basis, and surveying

peer agencies are presented. The paper also presents recommendations for improving the process and incorporating the process into an organization's ongoing management.

Document Available through the WSDOT Library

Partnerships for Progress in Transportation: The Transportation Research Board's 2007 Field Visit Program. 2008. Transportation Research Board, *TR News*

Reports from field visits made in 2007 by the Transportation Research Board (TRB) senior program officers to state departments of transportation and other transportation-related agencies and organizations reveal a focus locally and regionally on joint efforts and collaboration to address and resolve critical issues. This roundup of findings presents recent developments and initiatives in transportation research and applications nationwide in all modes and activities.

<http://onlinepubs.trb.org/onlinepubs/trnews/trnews254statevisit.pdf>
<http://onlinepubs.trb.org/onlinepubs/trnews/trnews254.pdf>

Handbook of Transportation Policy and Administration, 2007. Ed. Plant, Jeremy F, Johnston, Van R, Ciocirlan, Cristina. CRC Press

In the past few decades, the field of transportation has changed dramatically. Deregulation and greater reliance on markets and the private sector has helped to reconfigure the transport industries, while the rise of intermodal goods and global commerce has produced efficiencies of operation and a greater interdependence among transport modes. In addition, security issues have moved to the forefront as officials struggle with the challenge of protecting the vast transportation system while maintaining its operational efficiencies and effectiveness. Taking a multidisciplinary approach, the Handbook of Transportation Policy and Administration addresses the changes facing the field of transportation. Organized into five sections, it describes and analyzes major modes of transportation and components of the contemporary transportation system. Later chapters consider policy and administration and focus on managing transportation systems and assets. The final section covers security and protection of transportation systems. The handbook explores continuing development in the US and other nations, with an emphasis on the challenges created by technological change, globalization of the world economy, and the threat of terrorism. It examines the current state of major modes of transportation (air, rail, highways, waterways, ports, urban mass transit) and presents public policies and management approaches to make transportation systems efficient, innovative, and responsive. Drawing from scholars in a wide range of disciplines, including public policy, public administration, geography, economics, business logistics, engineering, and management, the Handbook of Transportation Policy and Administration serves as a comprehensive, single-volume reference for scholars, students, public officials, business and civic leaders, and transportation practitioners.

Document available through WSDOT Library

Order URL: <http://worldcat.org/isbn/ISBN9781574445657>

Succession Planning: Developing Tomorrow's Supervisory & Executive Leadership. 2006. Fisher, Teri R, Insight Strategies, Incorporated. Monograph Title: Bus & Paratransit Conference Proceedings, April 29-May 3, 2006, Orange County, CA. American Public Transportation Association

To ascertain whether succession planning is needed in an organization, as a leader it's important to reflect on the following questions: 1) If you were hit by a car tomorrow, do you know

who would replace you? 2) Is so, does this person have the requisite skills, knowledge and experience to take over now and be successful immediately? 3) Would the transition be seamless? If the answer is “no” to any one or all of these questions, then succession planning is worth considering for the organization. Additionally, upon one's departure—What short and long term impacts would it have on the organization, the Board, the bottom line, the public, your team, projects, the customer, etc.? Succession planning is a deliberate and systematic effort made by an organization to ensure a well-stocked pipeline of qualified individuals are equipped and ready to assume key positions at all levels. It's about retaining and developing the sometimes least appreciated part of an organization--its intellectual capital. It's not just about replacing the CEO. It's about creating leadership depth at all levels and building it into the DNA of an organization. In general, succession planning efforts are lacking in the private and public sectors. The Corporate Leadership Council states, “All organizations are facing the approaching ‘baby boomer’ retirement wave and the government sector is projected to be affected severely. (Some) agencies are faced with the prospect of losing more than half of its employees by the end of 2010, including a large number of the organization's leaders. This...makes succession planning a top priority for government organizations.” The transit services industry specifically has an opportunity to infuse succession planning into strategic planning efforts. To have a process in place that identifies the highest performers at all levels then systematically grooms them, ensures that resources are spent toward building a viable leadership bench from which to draw should a key position become available. This is in contrast to the all too common approach to promoting individuals that often relies on “gut feel” and consists of either ad hoc training or “sink or swim” efforts to equip one to take over. One transit GM puts it like this...“succession planning becomes great words to talk about in the boardroom, but not actions. The result (is), someone leaves, retires ‘gets run over by a car’ and we panic in our haste to fill a critical vacancy. We may try to recruit someone from another agency, but in this business, transit professionals are a small and shrinking pool. So we default to promoting someone based on ... their longevity with the company and our perception of their knowledge and skills. However, we never groomed them for the broader experiences and leadership required for the job, (and having a limited budget) to train them in these skills.” This dilemma and challenge exists industry wide. This paper will illustrate: 1) What gets in the way; 2) The components of a succession planning effort; 3) Greatest causes of failure; and 4) The downsides if left unaddressed.

Document available through WSDOT Library

Order URL: <http://worldcat.org/isbn/1931594201>

2006 CEO Leadership Forum: Advancing Practice in State DOTs from Good to Great. A Summary Report. 2007. Strege, Nancy, University of Minnesota, Minneapolis, Center for Transportation Studies, Minneapolis, MN. Ed. Snopl, Pamela. American Association of State Highway and Transportation Officials, Washington, DC, Federal Highway Administration, Washington, DC., Transportation Research Board, Washington, DC.

Building on the success of forums held in 2000 and 2003, the Center for Transportation Studies conducted this third CEO Leadership Forum September 24-26, 2006 at the University of Minnesota, in association with the American Association of State Highway and Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), and the Transportation Research Board (TRB). Funding support was provided by the National Cooperative Highway Research Program (NCHRP). The forum offered state department of transportation chief executive officers and their top staff the opportunity to share experiences--good and bad--with peers from around the country. The discussions centered on three themes: (1) roles and

partnerships, (2) customers and stakeholders, (3) funding and finance. This report summarizes the main events of the forum and lists the research action plans developed during the working sessions.

Document available through WSDOT Library

Linking of Mobility Performance Measures to Resource Allocation: Survey of State DOTs and MPOs. 2008. Klop, Jeremy, and Guderian, Erik, Fehr & Peers. Colorado Department of Transportation

The objective of this study is to provide a summary of the best practices of state departments of transportation and metropolitan planning organizations (MPOs) throughout the country regarding the linkage between mobility performance measures and resource allocation. The only mobility performance measure currently authorized for the Colorado Department of Transportation (CDOT) to denote congestion is volume to capacity (V/C) ratio. Currently, the V/C is used to identify the segments with V/C ratio of .85 and above which are considered congested. Because a universal policy linking mobility funding to performance measures among the agencies surveyed and interviewed was not identified, the research team recommends the following process in determining a resource allocation policy suitable to the needs of CDOT. The policy must address the following areas to be effective: (1) System Performance - One or more benchmark performance measures need to be determined as the best measures of mobility in Colorado for resource allocation. Based on the survey responses, agencies around the country set their mobility performance measure benchmarks on capacity-based performance measures (V/C ratio) or travel flow-based performance measures (travel time or travel speed). (2) Critical Deficiencies/Needs - Once the system performance benchmark measures have been established, critical locations within the roadway network that have mobility issues will be identified. (3) Prioritization - CDOT will be able to prioritize the critical locations identified in the previous step based on the severity of the problem and the volume of vehicles or people being served at each location. (4) Resource Allocation/Investment - Based on the annual mobility enhancement budget, the highest priority mobility projects will be funded and constructed based on need. (5) Measure Effectiveness/Return on Investment - It is important to conduct before/after studies at project implementation locations in order to quantify the return on investment for specific mobility enhancement projects. The findings from these studies, based on empirical data collected from performance measures, are critical to review in order to make better decisions about the prioritization list and resource funding.

<http://www.dot.state.co.us/Publications/PDFFiles/resourceallocation.pdf>

Defining the Next Generation DOT: An Integrated Mobility Company?

TRB

Started: 2007, Continuing

The context under which DOTs began has changed significantly. A number of DOTs have begun to evolve in response to changing conditions. State DOTs have become more cognizant of and responsive to broader issues beyond merely building the infrastructure. How should state DOTs perform their roles and responsibilities in this new paradigm? What does this new model look like and what are the approaches, methods, and systems that need to be in the new state DOT model?

The goal is to define the next generation DOT as a “mobility company,” for exploration and development. Desired products and outcomes include: Short case studies of new evolving models, identification of organizational change leaders and what they have achieved,

identification of new skills DOT staff need to develop and obtain, recommendations that outline new state DOT model. The study needs to recommend suggested roles for AASHTO, FHWA, and TRB to facilitate this shift.

<http://rns.trb.org/dproject.asp?n=14226>

Leveraging Organizational Leadership to Drive Performance to Delight the Customer. 2007. Shazor, Marilyn G, and Uihlein, Jay, Southwest Ohio Regional Transit Authority. Bus and Paratransit Conference and International Bus Roadeo, 2007. Corporate Authors: American Public Transportation Association

This paper describes how, like many other organizations, the Southwest Ohio Regional Transit Authority (SORTA)/Metro had become stagnant, complacent, and status quo. The quality of service was average on its best day. Vitality and energy were lacking. The need for change was in the air. SORTA had fallen into the drudgery of the day to day grind and needed to be recharged. Metro recognized that to once again become a vibrant, energized, high performing organization viewed as a vital part of the community, the need for change was in order. This was a turning point for Metro. Metro's CEO had made the first and potentially most important step in implementing a successful organizational change strategy. Understanding the need for change, the rest would be easy, right? Not quite. This change would require a clear vision and plan to achieve short and long-term goals. Metro applied the subsequent concepts of leadership and organizational change to drive performance and to become an employer of choice. Organization change is a common buzz phrase and somewhat commonplace in today's global economy. There are literally hundreds of documented processes and at least as many experts waiting to consult with organizations on managing change, implementing change strategies, becoming a high performance organization, etc. At Metro the key belief to successfully implementing change is in leveraging the organizational leadership. In order to leverage the leadership Metro had to define the vision and direction of the organization and ensure a monitoring and measurement system was in place to keep things on track. Metro's first step was to define short term goals and objectives that were clear and tangible and tied to everyone in the organization. Metro redirected some of its roles and responsibilities within the organization to ensure it has people in positions where they can be most effective. Metro has involved its customers, employees, and other stakeholders to determine the impact to customers, employees and others as Metro redefines how it does business.

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Order URL: <http://worldcat.org/isbn/1931594252>

DOT-Funded Positions and Other Support to Resource and Regulatory Agencies, Tribes, and Non-Governmental Organizations for Environmental Stewardship and Streamlining Initiatives. 2005. American Association of State Highway and Transportation Officials.

An increasing number of state transportation agencies are expediting project review times by funding government positions outside their own agencies to focus on transportation projects and programs, according to data collected in a 2005 survey sponsored by American Association of State Highway and Transportation Officials' (AASHTO's) Center for Environmental Excellence. Most states with Department of Transportation- funded positions have found these arrangements are helping to achieve the process efficiency and timeliness goals set forth by law as a condition of such funding. Citing heavy workloads as the primary reason they fund

positions, most DOTs are reaping the benefits of these funded positions through better, faster reviews that enable them to meet project deadlines. In general, funded positions are helping DOTs in problem avoidance, early consultation and development of programmatic approaches, and trouble-shooting when problems arise. This AASHTO report presents information on improvements to project delivery, trends in funded positions, the distribution of funded positions amongst resource agencies, administrative aspects of funding arrangements, performance measures and lessons learned. A comprehensive list of program management resources is provided in Appendix E; which includes online links for all referenced resources.

http://environment.transportation.org/center/products_programs/dot_funded.aspx

Organizing for Performance Management. 2005. Larson, Mark C., Minnesota Department of Transportation. Performance Measures to Improve Transportation Systems: Summary of the Second National Conference

The public-sector transportation community now has 15 to 20 years of experience in learning to plan and manage with performance measures. The paths of development vary widely from one organization to the next, yet they converge toward some common elements of effective practice. Great progress on this journey has been logged. Today, transportation investments are being selected on the basis of performance deficiencies and forecast benefits. Project status is reported regularly to managers, legislators, and the public. Politicians debate the performance level of snow and ice removal. A state transportation commission has posted experience in performance management as a critical qualification for a new secretary of transportation. This resource paper focuses on how that progress has been achieved--the factors that have contributed to success. Through interviews with veterans of practice and evidence from the Minnesota Department of Transportation's experience, the paper examines key drivers of development and elements of successful practice. The paper shares what experienced organizations see as the next steps in development. It looks at what tools can be added to the repertoire to make performance management more effective. Finally, the paper explores emerging challenges and issues. Interviews were conducted with eight states and two metropolitan planning organizations. Additional information was collected from the American Association of State Highway and Transportation Officials' Standing Committee on Planning meeting and peer exchange in Charleston, South Carolina, in May 2004; the October 2003 U.S. Department of Transportation roundtable in Washington, D.C.; the 2004 Transportation Research Board international scan; and other sources. This paper aims to crystallize the experience of a number of organizations and provoke thought and discussion. Other organizations may be blazing different paths to effective performance management. Transit organizations and regional organizations, for example, have experiences that are different from those of states.

<http://onlinepubs.trb.org/onlinepubs/conf/CP36.pdf>

Upgrade Stakeholder Service by Changing Your Agency's Organizational Culture. 2006. Atkins, J Richard and Turner, Daniel S. ITE Journal, Volume: 76, Issue Number: 12. Institute of Transportation Engineers

Today's young transportation professionals often have excellent technical skills, but rarely trained in business skills. This article seeks to guide young transportation professionals as they transition into management positions by introducing the concept of organizational culture. A real-life case study based on shaping the organizational culture of a municipal department of transportation is used to discuss organizational culture and to provide techniques to assess

current culture, define desired future culture attributes and develop a plan to achieve culture change. One of the key factors associated with successful organizational culture change is the need for a committed leadership team. Improvements in agency performance, customer satisfaction and employee morale are among the many benefits that result from changing the organization's culture.

Order URL: <http://worldcat.org/oclc/4061418>

Document available through WSDOT Library

Striking a Balance: A Passing Fad or an Essential Process? 2007. UC Berkeley Transportation Library.

This article reviews the growing importance of performance measures in government programs and looks at how their use can help and interfere with achieving program goals. Performance measures received a boost in emphasis in 1993, when President Bill Clinton signed the Government Performance and Results Act. While the growth of performance measures in the U.S. Department of Transportation (DOT) has grown significantly since then, they have been focused on outputs alone. Outcomes need to receive more weight. The article cites as an example an annual report from a state DOT in 2006 that never mentions items such as mobility improvements, travel time reductions or other indicators of the quality of the outcome, rather than just the inputs and outputs of spending and programs. Another state DOT, the Maryland DOT, is described as putting this sort of outcome measure to good use in its Managing for Results (MFR) analysis that it uses for internal tracking of agency work. There is a national project underway to devise a standardized method for making possible such assessments across state DOTs and federal agencies.

<http://ukintpress.com/traffic.html>

State DOT Performance Management Programs: Select Examples. 2007. American Association of State Highway Transportation Officials

State transportation agencies successfully use performance measurement to solve complex management challenges. This report illustrates the use of performance-based management approaches in the state departments of transportation (DOTs). It concentrates on three performance areas which exemplify the use of performance management systems, outcomes and measurement techniques based on a sample set of state DOTs that use a broad range of measures. The performance areas are: (1) asset management, (2) congestion and system performance, and (3) safety. The DOTs in Washington, Florida, Minnesota, Maryland, and Missouri were selected as case studies to show how state DOTs utilize performance measurement.

<http://www.transportation1.org/tif6sreport/>

Measuring Performance Among State DOTs. 2006. American Association of State Highway Transportation Officials

The purpose of this report is to describe how state departments of transportation (DOTs) may increase their use of comparative performance measures and to provide a foundation for further collaborative development of comparative performance measures by the American Association of State Highway and Transportation Officials (AASHTO) and its member states. The premise of

comparative performance measurement among DOTs is that independent agencies in different states often share similar strategic goals with their peers, such as smoother pavement or improved mobility, but that in any grouping of peers, one or two agencies are likely to devise unique yet transferable business processes that enable better performance in these areas. The benefits of using more comparative performance measures include more communication among DOTs, greater awareness about best practices and innovations, improved business processes, superior performance, and increased responsiveness to customers' needs.

<http://quality.transportation.org/sites/quality/docs/MeasuringPerformance.pdf>

Management and Public Policy 2005. Transportation Research Board

Abstract: This Transportation Research Record contains 29 papers on management and public policy. Specific topics discussed include travel behavior and transportation needs of people with disabilities, estimating trip generation of elderly and disabled people, extending older drivers' access to freeways, regional transportation's consensus building between local and tribal governments, using custom transportation data collection software with handheld computers, transportation skills needed by private-sector and public-sector organizations, communication strategies for state transportation research programs, transportation megaprojects, hedonic analysis of impacts of traffic volumes on property values, access to health care and nonemergency medical transportation, gender-based analysis of work trip mode choice of commuters, highway construction impacts on businesses, distributional consequences of gasoline taxation, commuting stress, urban campers, a sustainable transportation system, optimal land use-transport strategies, using environmental justice to evaluate the equitable distribution of a transit capital improvement program, strategic innovations in railroad management, collaboration for success in transportation, performance measures for surface transportation in different institutional and cultural contexts, performance measurement responses to changing political pressures at state departments of transportation, linking asset management to strategic planning processes, risk-based life-cycle cost analysis of privatized infrastructure, work site trip reduction model, effectiveness of programs for work site trip reduction, vanpool services, an ecotravel coordinator program, and investment analysis using the constraint multiobjective programming method.

http://trb.org/news/blurbs_detail.asp?id=6122

General Resources

The Public Innovator's Playbook: Nurturing Bold Ideas in Government. 2009.

William D. Eggers, Shalabh Kumar Singh, Stephen Goldsmith. Deloitte Research and Ash Institute for Democratic Governance and Innovation, John F. Kennedy School of Government, Harvard University

Governments around the world can address many of society's biggest challenges such as the current economic crisis by becoming better at innovating. "The public innovator's playbook" report, published by Deloitte Research in the U.S. with Harvard Kennedy School's Ash Institute for Democratic Governance and Innovation, describes how governments have the opportunity to help improve the economic environment, create jobs, and more efficiently manage costs.

According to the book, governments currently innovate. Moreover, some creative approaches in the private sector come from the public sector. However, few governments take an integrated view of the process or treat it as a discipline—which includes methodic processes, reward systems, and a mission linked to the process and organizational structure.

Summary:

Innovation is not just about generating good ideas — that's only the first step. Organizations also must select the best ideas, implement them, produce results, and then diffuse them.

Idea generation: Clearly, defining the problem and seeking the best possible solution is the first step in the innovation process. Ideas may be generated internally; agencies also should examine and perhaps adopt innovations developed in other organizations. One example is the recent "innovation exchange" program between the city of London and New York City. London offers its expertise in dealing with issues like congestion pricing and climate change while New York City shares its experience in improving access to services through 311 and other technology initiatives.

Selection: Which innovations are worth pursuing? This question is particularly important to public sector organizations, which have a hard time defending new ideas and face multiple stakeholders who might say no. The World Bank created an innovative process to give good ideas a fair chance: the Development Marketplace. The Bank set up a "bazaar" in its atrium, with booths allotted to 121 teams, each with an idea to propose. A panel of senior executives from the World Bank, private organizations, and the nonprofit sector evaluated the proposals. In a single day, 11 ideas received funding from a total budget of \$3 million.

Implementation: Once selected, an idea must be funded, developed, and executed. Incentive mechanisms such as gainsharing and share-in-savings contracts can help; however, many government programs lack predictable end results. Dealing with uncertainties and unexpected events requires flexibility and willingness to make mid-course corrections. The Florida School Year 2000 Initiative, a school-reform program that provided teachers handheld devices to record student information, worked because officials modified the technology used by the program after they encountered unexpected problems. Successful implementation also requires effective leadership that defines the mission of the organization and builds a coalition for change.

Diffusion: The last stage in the innovation cycle refers to the spread of an innovation throughout an organization or from one organization to another. This requires gaining support from all stakeholders, breaking down organizational silos, and overcoming apathy toward innovations. One way to encourage diffusion is to "create a buzz" around successful innovations. The Florida Department of Children and Families, which provides various child and community care services, slashed customer wait times by 45 minutes, reduced turnover, and saved \$11 million

annually. After the department's efforts earned several awards, word spread fast, and soon other state and federal agencies copied its efforts.

<http://www.innovations.harvard.edu/cache/documents/5534/553487.pdf>

ISO 9001:2000 - Quality management systems -- Requirements

ISO 9001:2000 specifies requirements for a quality management system where an organization needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements.

All requirements of this International Standard are generic and are intended to be applicable to all organizations, regardless of type, size, and product provided. Where any requirement(s) of this International Standard cannot be applied due to the nature of an organization and its product, this can be considered for exclusion.

Where exclusions are made, claims of conformity to this International Standard are not acceptable unless these exclusions are limited to requirements within clause 7, and such exclusions do not affect the organization's ability, or responsibility, to provide product that meets customer and applicable regulatory requirements.

http://www.iso.org/iso/catalogue_detail?csnumber=21823

Getting Started with Lean. Enterprise Lean Business Case

The mission of the Drive to Excellence is to create a long-term solution for the challenges and opportunities that are ahead for the state, from changing citizen and business demands for faster, better and more cost-effective services, to the pressures to do more with fewer budget dollars and an already shrinking workforce. These challenges demand a new way of thinking -- Lean Thinking.

Lean in Government Starter Kit

The Lean in Government Starter Kit, released by the Environmental Protection Agency (EPA), is designed to assist government agencies in effectively beginning a Lean journey. This kit offers practical techniques and strategies for federal and state agencies interested in implementing Lean process improvement methods.

<http://www.epa.gov/lean/toolkit/LeanGovtKitFinal.pdf>

Boosting business performance through organization design. 2009. Deloitte Consulting, LLP

Organization design is the vehicle through which business strategy is executed and defines the environment in which the talent of an enterprise is released. To that end, organization design is a critical business activity establishing the framework by which an enterprise serves its customers and interfaces with the market. As a result, a thoughtful, systematic approach to designing the organization is a key responsibility of senior executives and one of the few levers they can directly manage to help them achieve competitive advantage in an extremely challenging global marketplace. It is a creative act that, when executed effectively, enables ease of doing business, provides clarity to customers and vendors, spurs innovation, and releases

the talent of the enterprise. Conversely, a poorly executed organization design can create barriers of entry for customers, frustrate vendors' ability to effectively partner, inhibit the release of talent by creating unnecessary silos, and hamper value creation.

With that in mind, it is our contention that organization design transcends the act of aligning the components of a business; instead, it is a critical mechanism for positioning an enterprise for financial success by making the structure itself a source of competitive advantage. Through our work with global companies, we have developed a simple, clear, yet powerful approach to organization design that business leaders at every level can apply. Most importantly, we believe it can help companies achieve the competitive advantage they want. Most global companies are well down the path of articulating global product and customer strategies and optimizing their processes through Web-enabled technologies. The next frontier is maximizing the effectiveness of their organization's design and the talent within them.

PDF Available

An Efficient Frontier in Organization Design. June 1, 2009. Felipe A. Csaszar. INSEAD

This paper presents a framework to analyze a broad range of decision-making organizational forms that lie between the hierarchy and the polyarchy, by modeling how the structuring of decisions among multiple fallible agents affects the quality of the decisions made by the organization. The method predicts Type I and II errors, time to make a decision, proportion of good projects approved, and expected profits for each organizational form. The model has far reaching implications, as all organizations have to decide which organizational form they will adopt. One important result is that not all organizations are efficient; some organizational forms should always be preferred over others. Some implications of the model are discussed in light of the organization design and the innovation literature.

PDF Available

A double moral hazard model of organization design. December 20, 2007. Elazar Berkovitchy, IDC Herzliya, Ronen Israelz, IDC Herzliya, Yossi Spiegelx. Tel Aviv University

We develop a theory of organization design in which the ...organization's structure is chosen to mitigate moral hazard problems in the selection and the implementation of projects. For a given set of projects, the "divisional structure" which gives each agent the full responsibility over a subset of projects is in general more efficient than the "functional structure" under which projects are implemented by teams of agents, each of whom specializes in one task. However, the ex post efficiency of the divisional structure may encourage the ...manager to select more expensive (but still profitable) projects ex ante. We examine how the tradeoff between the ex post inefficiency in the implementation of projects and the ex ante inefficiency in the selection of projects is affected by various factors like size, complexity, and asymmetry in the importance of tasks. We also explore the desirability of adopting a narrow business strategy and the implications of managerial work overload for organizational structure.

PDF Available

Practical Approaches to Organization Design. 2007. Alison Sargent and Tim McConnell Human Resources and Organization Design consultants. McConnell HR Consulting Inc., Ottawa, CA. www.McConnellHRC.com

Is your organization well designed? How do you know? What does a well designed organization look like, and how does it feel to work there? How is it different from a poorly designed one?

The answers to these questions lie in the functional structure, also known as the Organization Design, of your work place. You've heard the term before, "Organization Design." The words are familiar to you at a high level, yet may be indistinct as to how they apply to your organization.

Although the concept has been around for ages, many HR professionals are unaware of its strategic impact, and more importantly, how Organization Design should be approached.

In this article, we will examine the concept of Organization Design (OD) and how it can work in your organization.

Doesn't OD mean Organization Development?

While they share the same acronym, Organization Design is not to be confused with Organization Development. In fact, these are two separate concepts. Organization Development deals with the "people" side of business performance; leadership, team dynamics, and operational effectiveness.

Organization Development is an effort that is planned, organization wide, and managed from the top. It is intended to increase organization effectiveness and health through planned interventions in the organization's process, using behavioral science knowledge. It is used to change beliefs, attitudes, and values in an organization. Organization Development entails leadership coaching, effective communication strategies, and change awareness to name a few factors.

The key to recognizing the difference is to understand that Organization Development is a response to Organization Design. In simpler terms, Organization Development deals with "soft matters," while Organization Design is "hard."

Organization Design is:

- ... About how work gets done. It examines the link between the goals of the corporation and how managers and staff are working to achieve those objectives.
- A process for improving the probability that an organization will be successful by assessing and re-shaping structure and positions to better meet (business) goals. It is a formal, guided process for integrating the people, information, and technology of an organization.
- Used to match the form of the organization as closely as possible to the purpose(s) the organization seeks to achieve.
- About determining the configuration of formal organizational arrangements, including the formal structures, processes, and systems that make up an organization

<http://www.mcconnellhrc.com/assets/Microsoft%20Word%20-%20OD%20Article.pdf>

What is the Right Organization Design? 2007. N. Anand and Richard L. Daft

Organizational Dynamics, Vol. 36, No. 4, pp. 329–344.

Robert Duncan published his seminal article, “What is the Right Organization Structure?” in *Organization Dynamics* in 1979. At that time, organizations were thought to be self-contained, and structure defined the reporting relationships among internal functional departments. Duncan’s article provided important insights about the conditions under which different internal arrangements would achieve a company’s mission. His insights are still referenced in management textbooks today. The purpose of this article is to present key developments in organization structure and design that have occurred since Duncan’s article and describe when each can be used for greatest effect. We will briefly review the important structural designs from 30 years ago and then describe key developments since that time. The concepts are organized into three eras, which reflect substantive changes in management thinking from vertical organization to horizontal organizing to open boundaries via outsourcing and partnering.

PDF Available

Redesign of Organizations as a Basis for Organizational Change. 2005. Mark Hoogendoorn, Catholijn M. Jonker, and Jan Treur.

Artificial Intelligence has contributed (formal) design models and software support tools to application areas such as architecture, engineering, and software design. This paper explores the effectiveness of applying design models to the area of organization (re)design. To that purpose, a component-based model for (re)design of organizations is presented as a specialization of an existing generic design model. Using recently developed formalizations within Organization Theory organization models are described as design object descriptions, and organization goals as design requirements. A formal design process description is presented that models the redesign process for an organization that adapts to changes in the environment. The formally specified and implemented approach to organization redesign thus obtained has been tested for a well-known historical case study from the Organization Theory literature.

PDF Available

Opportunities for Action in Organization: A Survivor’s Guide to Organization Redesign. 2003. The Boston Consulting Group

Successful organization redesigns—particularly those with the goal of dramatic, long-term change tend to be implemented more organically than mechanically. As noted, a test-and-learn mentality often prevails. For example, a global automotive company has pioneered shared services in finance, human resources, and other support functions by first piloting the new organization on a project basis. In stark contrast to the troubled redesign of the global company described at the outset of this article, the automotive company fostered broad buy-in. Indeed, it did not change its formal reporting lines until employees were confident that the new processes could deliver. For a redesign effort to succeed, a company must have a clear vision for action, committed leadership, and exacting project management. That is just for openers. It also must rigorously manage its change program to guarantee that key stakeholders are involved in and support the process, and it must monitor the emotional response of its employees. The change process must be addressed at the very outset of the redesign—when the critical business issues are starting to be identified. Waiting until the redesign is over is an enormous mistake:

employees will already have made up their minds about the change, and their opinions will almost certainly be negative. In that case, the redesign effort may not survive. The price of such a failure will be high, not only in financial terms but, more important, in terms of the redesign's impact on people.

<http://www.bcg.com/documents/file14060.pdf>

Getting Results through Organization Design. 2003. E. Craig McGee, Ph.D. and Kathy Molloy, M.A., M.B.A.

A critical success factor for organizations today is the ability to adapt their structures, systems, and processes to capture new markets and expand existing ones. A critical determinant of strategic competitive advantage is organization design. This article demonstrates the strategic importance of organization design for business leaders; the impact effective design has on the bottom-line; and tips on how to design organizations for flexibility.

The article describes some key warning signs that indicate when an organization design is required and some tips for leading that redesign. The authors provide guidance on how to determine which design is right for your company, and how to avoid the common problem of outmoded organization designs. Case examples from several companies are provided.

PDF Available

Organizational Redesign: Helping your Business Restructure. John Cooper, MSOD

"We trained very hard, but it seemed that every time we were beginning to form into teams we would be reorganized. I was to learn in this life that we tend to meet any situation by reorganizing. And a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization." [Frequently attributed to Petronius Arbiter circa 60 A.D.]

If you or some part of your organization is involved in restructuring, you are not alone.

Changes in the marketplace and drives toward efficiency demand organizational flexibility, and restructuring is one of the most common strategies. There are many reasons that businesses change their structure – some reasons better than others. As a line manager, internal and external consultant, I have been involved in dozens of restructuring initiatives. What follows are some key elements to address as you go through your restructuring process. A chart on the last page summarizes these points.

Three Phases, Three Issues

The three major phases of restructuring are Planning, Implementation, and Follow Through.

Considerations for Structural Change – Summary Chart

Planning and Design: Keep focused on the reason for the new design. Energize efforts to make it work, and realize that support process changes take time and sustained energy. Keep open dialogue as people adjust to the new organization.

- Have a clear and compelling business case that is tied to stakeholder needs. Agree on key criteria for your new design that addresses the business case.
- Understand the strengths and weaknesses of your proposed structure. Understand the resultant changes through the organization.

- Involve key stakeholders to design the best structure. Communicate appropriate information as soon as you can, to prepare people for change.

Implementation: Keep discussing the reasons and business case. Keep in mind your organization's capacity for change and invite feedback to adjust as you move forward.

- Communicate clearly and frequently the purpose and business case. Create open dialogue with employees and customers to enlist them and receive valuable feedback.
- Plan well, taking into account the many process changes required to support the new structure.
- Engage people in open conversations during implementation. Invite suggestions and feedback to determine needed modifications as you move forward.

Follow Through: Keep focused on the reason for the new design. Energize efforts to make it work, realize that support process changes, and take time and sustained energy. Keep open dialogue as people adjust to the new organization.

- Keep focused on the reasons for the new structure as much as making it work.

PDF Available

Managing the Change to a Lean Organization. August 2009. Willie Carter.

I am the President of Quantum Associates, Inc—an independent consulting firm specializing in providing solutions for creating customer value. I am an ASQ Certified Manager.

The best approach to becoming a Lean enterprise is to structure the company around value streams. A value stream is all the activities, both value-added and non-value-added required to bring a product or service from concept to launch and from order to delivery. It includes all the steps involved in providing a product or service from initial concept until the customer pays for the product or service. Making up the value stream is all functions and stakeholders who need to work in harmony to provide the product/service. Always identified with the value stream is a product/service family—the group of products or services that broadly follow the same process steps.

Reorganizing or restructuring operations around value streams should generally follow pilot project and kaizen team events. The pilot projects and kaizen events will identify and eliminate waste in many of the organization's processes which will help management redesign the processes without the unnecessary layers or activities and better determined who should be responsible for the value stream comprised of the redesigned processes.

At the same time, the process of becoming a Lean enterprise requires strong top management commitment and leadership. It involves creating a vision, assessing managers several levels down, chartering pilot and kaizen teams, reading their results, and modifying the whole process as it proceeds. Top management must resolve major tensions that surface along the way. For example, revolutionary changes like reorganizing into value streams will usually challenge the perceived or real power of some decentralized line managers or senior function heads. At this point, these line managers or senior function heads may need reminding that reorganizing into value streams does not exclude them from lean thinking, or mean that some operations cannot on occasion, be centralized.

<http://ezinearticles.com/?Managing-the-Change-to-a-Lean-Organization&id=2450554>

Sources on Changing Transportation Policy, Funding, Organization, and Structure

Goals Enumerated in the Federal Transportation Policy and Planning Act of 2009

Letter from US PIRG 2009

Critical benchmarks for future transportation policy:

- Reduce national per capita motor vehicle miles traveled on an annual basis
- Reduce national motor vehicle-related fatalities by 50 percent by 2030
- Reduce national surface transportation-generated carbon dioxide levels by 40 percent by 2030
- Reduce national surface transportation delays per capita on an annual basis
- Increase the percentage of system-critical surface transportation assets that are in a state of good repair by 20 percent by 2030
- Increase the total usage of public transportation, intercity passenger rail services, and non-motorized transportation on an annual basis
- Increase the proportion of national freight transportation provided by non highway or multimodal services by 10 percent by 2020
- Reduce passenger and freight transportation delays and congestion at international points of entry on an annual basis.

http://www.browardaudubon.org/uploads/HR2724_letter_6.10.09.doc

National Transportation Policy Project. Bipartisan Policy Project. June 2008

Current federal transportation policy is an amalgamation of outdated programs and top-down funding streams that lacks national purpose, performance, and accountability. The National Transportation Policy Project is bringing new voices to the transportation debate to establish a bottom-up, performance-based transportation vision that promotes economic competitiveness, energy security and environmental improvements, and safety.

http://www.bipartisanpolicy.org/sites/default/files/ntpp_performance%20driven_executive%20summary_june%209%2009_1.pdf

The Transportation Challenge - Moving the U.S. Economy. April 2008. U.S. Chamber of Commerce

. . . . The productivity and success of the transportation services sector ties directly to the capacity and performance of the nation's transportation infrastructure. When transportation service sector productivity drops and costs go up, clients in the manufacturing, retail, agriculture, natural resources, and service sectors feel the effects immediately.

. . . . Continued underinvestment and business-as-usual transportation policies and programs will have a detrimental impact on the ability of the United States to compete in the world economy. Without adequate transportation infrastructure capacity and reliable and cost-effective transportation services, the economic growth, productivity, and competitiveness of metropolitan

areas, mega regions, and key industries are at risk. It is time for the United States to strategically plan and invest in its transportation system. Otherwise, the transportation system will become a competitive disadvantage for U.S. industries, and it will be harder and harder to sustain the growth of the national economy.

<http://www.uschamber.com/publications/reports/0804transportationchallenge>

Closing the Infrastructure Gap: The Role of Public-Private Partnerships. 2008. A Deloitte Research Study

First, governments need a clear framework for partnerships that confers adequate attention on all phases of a life-cycle approach and ensures a solid stream of potential projects. This can help avoid problems of a poor PPP framework, lack of clarity about outcomes, inadequate government capacity to manage the process, and an overly narrow transaction focus. Second, a strong understanding of the new innovative PPP models developed to address issues that are more complex can help governments to achieve the proper allocation of risk—even in conditions of pronounced uncertainty about future needs. This allows governments to better tailor PPP approaches to particular situations and infrastructure sectors. Last, in addition to providing higher-quality infrastructure at lower cost, governments can use PPP transactions to unlock the value from undervalued and underutilized assets, such as land and buildings, and use those funds to help pay for new infrastructure.

https://www.deloitte.com/dtt/cda/doc/content/ie_PS_ClosingInfrastructureGap_1008.pdf

The Ground Floor: Infrastructure 2009: Pivot Point Underscores Need to Transform. 2009. The Urban Land Institute

The United States desperately needs a 21st-century national infrastructure plan to emerge from its deep recession and ensure future prosperity, according to [Infrastructure 2009: Pivot Point](#), a new publication released today by the Urban Land Institute and Ernst & Young. Infrastructure 2009 calls for overhauling federal infrastructure policy and integrating land use and infrastructure planning at all levels of government. Such a plan, the report says, could result in greater leveraging of public investments; an improved mobility network that adequately supports desired economic growth; and the mitigation of greenhouse gas emissions through reduced auto dependency. The publication discusses the evolving infrastructure market, including private systems, and the combinations of public-private systems for funding, construction, operations, maintenance, and management.

Infrastructure 2009 details a four-pronged approach to changing infrastructure policy that addresses how the nation plans, funds and implements infrastructure programs:

- Create a national strategy – A comprehensive strategy is needed that accounts for population growth, rapid urbanization, and declining mobility throughout urban areas. New transport networks must interconnect more efficiently to move people and goods through increasingly congested global pathway cities. Innovative new transit schemes, connected to airports and train stations, must help reduce car dependency, prevent bottlenecks in commercial centers, and decrease pollution.
- Plan holistically – Goals to reduce congestion, cut carbon footprints, decrease foreign oil dependency and ensure adequate water supplies require integration of transportation, energy, and environmental programs with land use planning and housing policy. Where

people choose to live and work and how they travel will often be determined by the cost and convenience of various transport options.

- Consolidate government management – Federal, state and local governments must restructure agencies responsible for transportation, housing, water, and energy to manage and execute a coordinated infrastructure policy. States should break down silos between different transportation agencies and local land use authorities to formulate long-range regional plans that tie into a national infrastructure agenda.
- Change funding approaches – More of the funding burdens for new infrastructure networks and repairs must shift to users from taxpayers, since government coffers alone will never be sufficient to cover costs. Among the new sources of funding for transportation are: higher gas taxes, greater use of highway tolls, charges for vehicle miles traveled. The report also supports establishment of a national infrastructure bank – drawing on the success of the European Investment Bank -- to help finance national networks and attract more private capital.

http://thegroundfloor.typepad.com/the_ground_floor/2009/04/infrastructure-2009-pivot-point-underscores-need-to-transform-.html

Infrastructure 2009 Slide Show – Pivot Point. ULI

<http://www.slideshare.net/virtualuli/infrastructure2009?type=presentation>

Transportation for a New Era: Growing More Sustainable Communities. 2009. The Urban Land Institute, Washington, D.C. (Permission to cite from Dean Schwanke [Dean.Schwanke@ULI.org], Sept. 17, 200)

Executive Summary

Transportation in America is at a pivot point. With the upcoming authorization of the next federal surface transportation bill—the current bill expires in September 2009—we face a historic opportunity to fundamentally rethink how we plan, fund, and build our transportation networks.

These choices matter; the country's economic vitality, environmental and energy sustainability, and quality of life depend heavily on the choices we make about transportation. By refocusing the federal program, making the reforms we need, and facilitating the participation of the private sector, transportation policy can set the stage for a brighter future for all Americans.

Congress, the Obama Administration, and others are working diligently to forge a path forward, and many proposals for reform are on the table. The connections among land use, infrastructure, and sustainability are being discussed like never before. To contribute to this conversation, the Urban Land Institute, through its National Transportation Policy Dialogue, brought together leading real estate and transportation thinkers and practitioners to consider the links among real estate, development, and transportation. The group identified several recommendations—intended to guide transportation policy and programs at the federal level:

- Create a national vision for transportation and infrastructure
- Support the metropolitan areas that drive U.S. prosperity
- Recognize the role of land use in linking infrastructure, housing, and sustainability
- Foster and encourage more compact development
- Channel funding through the “three Bs”:

1. Use base formula funds to maintain the system;
2. Provide a bonus pool to create incentives for sustainable investment; and
3. Create an independent American Infrastructure Bank to invest in infrastructure.

<http://www.uli.org/ResearchAndPublications/Reports/~//media/Documents/ResearchAndPublications/Reports/Infrastructure/Transportation%20for%20a%20New%20Era.ashx>

ULI 2008 Annual Report Recommendations on Infrastructure Organization and Investment. 2008. The Urban Land Institute

Highlights of Recommendations:

- Begin with land use, and tie infrastructure to housing and economic growth.
- Make all infrastructure investments performance based and outcome oriented; change the discussion from what we are spending to what we are getting.
- Integrate strategies and investments; use technologies and other solutions first.
- Incorporate an ethic of stewardship for the future and the environment.
- Reform the way in which infrastructure is designed, financed, and constructed
- Infrastructure issues are regional; energy, water, and transit all require cross-jurisdictional leadership at the right level.

<http://www.ulisd.org/pdf/2008-uli-annual-report.pdf>

Reinventing Transportation Organizations: The devil you know, rather than the one you don't? October 2008. Robert T. Dunphy, ULI senior resident fellow, Transportation and Infrastructure. Urban Land Institute: The Ground Floor

There is widespread belief among critics and many transportation practitioners that the way transportation projects and services are delivered in the U.S. is need of fundamental change. These ideas were addressed by experts at the 2008 ULI Fall Meeting.

Such institutions tend to be top-down, command and control organizations, suited to the mobilization of large resources for safely moving masses of people.

The immediate opportunity is the reauthorization of the federal surface transportation programs scheduled for next fall. Robert Healy, vice president of the American Public Transportation Association, pointed out that APTA's membership, which represents transit operators in virtually every state and congressional district, considered the possibility of blowing up the current model in favor of recommending (potentially) improved procedures and funding. They demurred, and opted for improvements in existing procedures rather than a complete makeover, to assure a better, but reliable process--kind of the devil you know, rather than the one you don't.

http://thegroundfloor.typepad.com/the_ground_floor/2008/10/reinventing-transportation-organizations-the-devil-you-know-rather-than-the-one-you-dont.html

DOT and HUD: Transportation and Land-Use Planning Should Prioritize TOD.

March 18, 2009. Matthew Roth. *Streetsblog* San Francisco

While we understand that health care reform is going to dominate much of President Obama's first term, given transportation costs, swelling VMT, and the need to address climate change, we hope he will give considerable support to USDOT Secretary Ray LaHood's good initiatives. Like the one he just announced with HUD Secretary Shaun Donovan to marry transportation and land use funding for support of transit-oriented development and environmentally sustainable and affordable housing under the aegis of strong regional planning. The DOT and HUD will form a task force to "enhance integrated regional housing, transportation, and land use planning and investment. The task force will set a goal to have every major metropolitan area in the country conduct integrated housing, transportation, and land use planning and investment in the next four years." The DOT will encourage regional MPOs to conduct integrated planning in their long-range plans.

<http://sf.streetsblog.org/2009/03/18/dot-and-hud-transportation-and-land-use-planning-should-prioritize-tod/>

New Fiscal Year Brings No Relief From Unprecedented State Budget Problems.

September 3, 2009. Iris J. Lav and Elizabeth McNichol. Center on Budget and Policy Priorities

State Fiscal Stress Continues

At least 48 states have addressed or still face shortfalls in their budgets for fiscal year 2010.

Just two months into the new fiscal year, new shortfalls of \$28 billion have opened up in the adopted 2010 budgets of at least 15 states and the District of Columbia. Shortfalls for fiscal year 2010 — those already addressed and those still open — total \$168 billion.

At least 36 states already anticipate deficits for 2011. Initial estimates of these shortfalls total almost \$74 billion. As the full extent of 2011 deficits become known, shortfalls are likely to equal or at least \$180 billion.

Combined budget gaps for the next two years — state fiscal years 2010 and 2011 — estimated to total at least \$350 billion.

The unprecedented state fiscal problems brought on by the worst decline in tax receipts in decades show no signs of letting up. On July 1 — the start of the fiscal year in most states — an unusually high number of states were still struggling to adopt budgets for fiscal year 2010. Most states have adopted budgets that closed the shortfalls they faced with a combination of federal stimulus dollars, service reductions, revenue increases, and funds from reserves. But these budgets are already falling out of balance as the economy has caused state revenues to decline even more than projected. States will continue to struggle to find the revenue needed to support critical public services for a number of years.

The Center's most recent survey of state fiscal conditions found many signs of the depth of the state budget crisis.

<http://www.cbpp.org/cms/?fa=view&id=711>

PDF Available